4.9 CULTURAL RESOURCES

4.9.1 Environmental Setting

Information for this section was obtained from the *Cultural Resources Survey for the Line 108 Pipeline Project* (PG&E 2006), which included results of three record searches conducted by Applied Earthworks, Inc. at the North Central and Central California Information Centers of the Historical Resources Information System, and results of intensive pedestrian surveys conducted by Applied Earthworks, Inc. All information presented in this section has been independently reviewed and the information verified or deemed adequate by Environmental Science Associates (ESA) or its cultural resources subconsultant, Tremaine and Associates.

The proposed Project area is located in the southern portion of the Sacramento Valley, within the northern half of the Central Valley of California, and just north of the Sacramento-San Joaquin Delta (Delta). The Sacramento River and its tributaries from the northern headwaters drain this rich California agricultural valley south to the Delta. The Project area is situated along the easternmost edge of the Stone Lakes Basin, a natural overflow basin east of the Sacramento River. The Sacramento River is about six miles west of the Project area, and the Cosumnes River is about five miles to the east. Prior to modern control systems, winter and spring flooding occurred due to seasonal precipitation and snow-melt from the Sierra Nevada Mountains to the east.

Physical Environment (Landscape Changes in the North Delta)

Human land use, landscape changes, and archaeological site visibility are interrelated processes. Given the natural relationship between people and the environment, the following section briefly examines: (1) the nature, timing, and magnitude of landscape changes; (2) the potential role of landscape change on human use and settlement patterns; and (3) the possible effects of large-scale landscape evolution on the nature, completeness, and visibility of the archaeological record in the north Delta.

Human occupation of California extends back at least 11,000 years, but no evidence has been found of settlement in the north Delta prior to 4,500 years ago. To understand the reason for this, and to understand the adaptations of the region's cultures, it is necessary to understand the physical geography of the area.

The Great Central Valley is a huge basin filled with sediment. Sands and gravels over 30,000 feet deep lie upon Sierran basement rocks that extend downward at an angle

from the western slope of the Sierra Nevada. The deepest parts of the gravels and sands are marine sediments that have accumulated since late Jurassic time, about 145 million years ago.

Sometime during the Holocene, the Sacramento River narrowed to its present location and a lowland basin formed where the river had previously existed. The fluvial system changed from a braided river to an anastomosing river. Levees and dunes developed along the banks of the Sacramento River as lateral accretion deposits. The basin area to the east was subject to periodic flooding and a wetland environment developed with drainages to the southwest (Atwater and Marchand 1980).

Historic efforts at reclamation from 1900 to 1950 brought about the most far-reaching changes to the north Delta and the Project area. Construction of hundreds of diversion dams, dredging, clearing of riparian vegetation, construction of irrigation canals, holding reservoirs, and extensive levee systems were undertaken to satisfy the demand for water, power, and flood control. The sequence of land reclamation in the Delta indicates that the Project area was reclaimed between 1890 and 1900 (Thompson 1965). Consequently, floodplains stabilized and no longer received periodic deposition of sediments.

The Project area, as discussed above, has undergone a series of significant landscape changes that no doubt affected the distribution of plant, animal, and human communities during the Late Pleistocene and Holocene. These changes have resulted in the burial of formerly stable land surfaces that were available for human use and occupation. As such, the nature, completeness, and visibility of the archaeological record within the Project area is a reflection of the timing and extent of Holocene landscape evolution.

Cultural Overview

Prehistoric Context

Sacramento Valley prehistory is addressed below within a framework of five temporal periods identified as the Paleo-Indian, Lower Archaic, Middle Archaic, Upper Archaic, and Emergent periods.

Paleo-Indian

Little is known about prehistoric occupations in the Central Valley during this early period (12,000 to 8,000 before present (B.P.)), as evidence is limited. As is typically

noted in cultural resource assessments for Sacramento, "older villages might have existed on extinct land forms, however due to the silting effects of these major rivers [*American and Sacramento*] through time, these landforms would be so deeply buried that they have not been detected as yet" (Gross 2000:19-20). Flaked stone tools associated with the early part of this period (i.e., 12,000 to 10,000 B.P.) have been found elsewhere in northern California. They include Clovis-like large fluted points that were likely hafted and used as darts on spears propelled by an atlatl. The large fluted points in northern California tend to be found in isolation; however, elsewhere in western North America they have been found in association with the remains of large bison. This association has led archaeologists to suggest that these early populations were focused on the pursuit of large game. It is further inferred that these people traveled in relatively small groups, were highly mobile, and settled around wetlands (e.g., lakes and rivers) where large game was also likely to congregate.

The latter part of this period (10,000 to 8,000 B.P.) saw a general warming trend (i.e., the Anathermal) resulting in the drying of Pleistocene lakes and an overall shift in flora and fauna distributions. Sites dating to this time identified in northern California are recognized by the presence of large (i.e., dart-sized) stemmed points, collectively referred to as Great Basin Stemmed series (McGuire and Nelson 2002). Bifaces, scrapers, cores and items termed eccentrics, but better known as crescents, are also characteristic of this time period. Obsidian sourcing conducted on tools from northern California sites indicate that toolstone was acquired from a variety of quarries, some at distances up to approximately 125 miles away (McGuire and Nelson 2002). Most of these sites are found near ancient lakeshores or within marshlands, leading some to associate the settlement/subsistence pattern with Western Pluvial Lakes Tradition (PG&E 2006).

Lower Archaic

Like the previous period, the Lower Archaic (8,000 to 5,000 B.P.) is poorly understood in the Central Valley. Few sites in the region have been found owing to the fact that evidence from this time period is largely buried, given the depositional environment. A buried component in the Kellogg Creek drainage was discovered at the toe of Mount Diablo, at a depth of about 13 feet below the surface. It yielded a sparse but diverse assemblage, including traces of freshwater mussel, low to moderate densities of faunal material (primarily artiodactyls and small mammals), handstones, millingslabs, large cobble-core tools, and large projectile points and biface fragments (including large wide-stem variants of Napa obsidian). This assemblage reflects long-term, periodic use of

the western flanks of the Central Valley. Macrofloral remains (acorn and cucumber) indicate only short-term seasonal use, probably associated with a highly mobile adaptation. Another Lower Archaic component was recently discovered in downtown Sacramento, buried between 11 and 12 feet deep.

Middle Archaic

The Middle Archaic Period (5,000 to 2,200 B.P.) is identified as one that emphasized hunting, evidenced by the relative proportions of tools representative of hunting, fishing, and gathering activities. Artifacts characteristic of this period include distinctive shell ornaments and charmstones, large projectile points with concave bases and stemmed points, baked clay balls (used for cooking) and milling tools. Net weights, bone fish hooks, and bone spear tips provide evidence for fishing (Bennyhoff 1950; Ragir 1972). Burials of this period tend to be extended, oriented towards the west, and often contain grave goods such as baked clay balls, charmstones, shell beads, and exotic minerals.

Upper Archaic

Sites associated with the Upper Archaic Period (2,200 to 1,000 B.P.) contain substantial midden deposits with shell, mammal and fish bone, charcoal, milling tools, and other artifacts. The number of mortars and pestles increased during this time, suggesting a greater reliance on acorn and nuts. The increase in obsidian, shell, and bead assemblages observed at sites of this time period is thought to indicate a greater complexity of exchange networks and social stratification. Burials were more often flexed, as opposed to extended, with varied orientations and notably fewer grave offerings, generally involving limited numbers of utilitarian items or ornamental objects (Frederickson 1974). This period is well represented at several large mound sites situated along the Sacramento and American Rivers.

Emergent

The Emergent Period dates between 1,000 B.P. and the arrival of the Spanish in central California (i.e., 1800s) and is identified as the Late Horizon under the Central California Taxonomic System (CCTS) (Fredrickson 1973). This period involves a dramatic change in general economy, characterized by large village sites situated on high ground, increased evidence of acorn and nut processing, introduction and use of the bow and arrow (indicated by small projectile points), and use of clamshell disc beads as the primary medium of exchange. During the latter part of the period (i.e., within the last 500 years), cremation became a common mortuary practice; grave goods were often burned as well. Sites from this time period often include items of Euro-American

manufacture, such as glass trade beads or worked bottle glass. Like the Upper Archaic Period, several sites along the Sacramento and American Rivers contain components dating to this time.

Ethnographic Context

The southeastern end of the Sacramento Valley up to the confluence of the Sacramento and San Joaquin Rivers, north of Stockton, comprised the Plains Miwok territory. With the exception of historical accounts by early explorers of the region (Cook 1955 and 1960), little of the Miwok way of life can be pieced together. From fragmented chronicles and baptismal records, Cook estimated that large populations of people (nearly 11,000) once lived along the Cosumnes and Mokelumne Rivers, with multi-lineage villages incorporating as many as 300 to 475 individuals each. Smaller populations referred to as tribelets are thought to have lived on the Sacramento floodplain (Bennyhoff 1977). Based on historical accounts and documents, the Junizumne, Chupumne, Ochejamne, and Gualacomne inhabited the surrounding environs.

Typical of the surrounding Central California groups, the “tribelet” was the largest political unit, comprised of peoples with a sense of cohesion, local autonomy, and use/ownership of a certain territory (Kroeber 1962). Each occupied a place more or less continuously for generations so that the bulk of the population was essentially sedentary. Land use was probably comparable to that for the Patwin, among whom resources were variably controlled. Acorn and hunting lands were considered communal property, while seed tracts and fishing stations were individually allocated in accordance with inherited use-rights. While individuals could claim the crops of certain trees, property marks were respected only for a single season (Kroeber 1932).

One ethnographer has suggested that each family was economically dependent or reliant on trade and that the emergence of class differentiation was based on: (1) wealth differences as denoted by special terms, dress, mortuary rites, and obligations and (2) professional specialization, inferred from repeated references to individuals engaged only in the taking of certain kinds of animals, birds, or fish, and in the manufacture of more complicated or time-consuming artifacts (Bennyhoff 1977). The extensive external trade relations that existed, while not free of barter and the gift aspect, were conducted largely through the use of clamshell disk beads, which represented a standardized medium of exchange. The aboriginal economy of the valley groups may have approached a perfected adaptation to a bountiful habitat, relying on an intensive

food collecting strategy integrated with compatible hunting and fishing activities (Bennyhoff 1977). In this context, leisure time in settled villages was available for specialized handicrafts and ceremonial elaboration (Gifford 1926a, 1955). Evidence for the success of this economic system has been found in the virtual absence of famine or starvation and a higher density of population than that found in many agricultural regions elsewhere in North America (Bennyhoff 1977).

Historic Context

Spanish intrusion into the Sacramento Valley occurred in the early 1800s with the initial intent of scouting new mission sites, searching for runaway Native American neophytes, and investigating rumors of Russian encroachment (Beck and Haase 1974). Moraga and his soldiers from Mission San Jose are credited with being the first to enter the valley in 1808 and discover the Sacramento and American Rivers, which they named the "Sacramento" and "Jesus Maria." In 1821, another small expedition followed the Sacramento River seeking out Euro-American intruders. Moraga and subsequent Spanish explorers established no settlements; however, their exploration created opportunities for others to follow.

Trappers and mountain men explored the Sacramento Valley as early as 1826, leading the way for Euro-American settlement along the Sacramento River. In 1827, Jedediah Smith and his party of fur trappers opened a northern route through California that followed the Sacramento River.

Although relatively short-lived, California's Mexican administration between 1821 and 1848 facilitated the economic transition between Spanish mercantilism and Euro-American capitalism. The Colonization Act of 1824 and the Supplemental Regulations of 1828 afforded private individuals, both Mexican nationals and immigrants, the right to obtain title to land (Hackel 1998). In 1834, the missions were secularized, effectively freeing up their enormous landholdings to private interest. From this point until California's accession into the Union, the Mexican authorities made over 800 land grants, often designated as "ranchos," to individuals with the intent to settle and improve these parcels (Monroy 1998).

Perhaps the most celebrated recipient of these grants was John Sutter, whose New Helvetia settlement eventually became Sacramento. He controlled several other outlying properties either by purchasing them outright or incorporating them into his sphere of influence. As a government official, Sutter recommended that the lands south of his New Helvetia holdings near the Mokelumne River be granted to William Gulnac,

Peter Lassen, and other entrepreneurs (Smith 2004). Anastasia Chaboya, a wealthy rancher who had earlier expressed interest about the land in a conversation with Sutter, complained to the authorities that too many aliens were receiving land at the expense of native-born Californians. Despite Sutter's objections, Governor Micheltorena bestowed Chaboya the Sanjon de los Moquelumnes grant in 1844. The northern end of the Project area lies adjacent to the western boundary of this 35,509-acre parcel. Chaboya stocked his new rancho with horses and cattle from his San Jose holdings and built homes and corrals along the Cosumnes River. Unlike some grantees, including Sutter who was unable to retain much of his property into the 1850s, Chaboya maintained ownership of the Sanjon de los Moquelumnes after California's accession to the Union in 1850.

That same year, discovery of gold triggered a massive influx of fortune seekers into California. Sacramento and Stockton, which could be reached via steamboat from San Francisco, served as the port of entry to the Sierra Nevada gold fields. Similarly, Mokelumne City was established in 1850 as a deep channel inland port near the confluence of the Mokelumne and Cosumnes Rivers (PG&E 2006; Office of Historic Preservation 1990). By 1861 the town was the third largest in San Joaquin County with three general stores, two hotels, blacksmith, saloon, warehouses, and 23 residences. Like many other early riverside towns in California, Mokelumne City was consumed by flood-water during the winter of 1861/1862. Located near the south end of the Project area, the town is designated as California Historical Landmark No. 162.

As the gold rush subsided, former miners looked to other pursuits. The 1855 Government Land Office (GLO) maps of the Project vicinity dated 1855 indicate that agriculture was taking hold in the lands south of Sacramento. The map depicts several scattered homesteads ranging in size from 40 to 640 acres. At least four of these farms were near the Project corridor. Prior to the 1870s when reclamation efforts began in earnest, much of the delta region was still marshland; "Tulere Swamp" lay a few miles northwest of the Project area and was bordered by a dense band of cultivated fields and homesteads. The Sacramento and Stockton Road and the Stockton and Telegraph Road (or Lower Stockton Road) connected the State capital with the valley's Port City. The latter roadway closely paralleled the proposed pipeline route. Located along Lower Stockton Road just north of the Project area, the "Twelve Mile House" was built in 1850 and was a favorite rest stop before Georgetown was established a few years later.

In 1856 the County of Sacramento established Franklin Township, an administrative district roughly situated between greater Sacramento and the Mokelumne River. The

area was described as either swamp or agricultural, and there were large quantities of wheat and fruit raised in the township. The fruit was grown principally along the river, and consisted of apples, pears, peaches, plums, cherries, and all sorts of small fruit (Davis 1890).

In 1856 the town of Franklin, originally called Georgetown, was settled by Andrew George, who opened the Franklin House hotel that same year (Davis 1890). Three years later, the Franklin School District was founded and a schoolhouse was constructed just west of Lower Stockton Road (Sacramento County Office of Education 2007). About the same time, the community established the Franklin Cemetery, where Alexander Hamilton Willard, the last surviving member of the Lewis and Clark Expedition, is buried (California Historical Landmark No. 657).

In 1870, the Central Pacific Railroad Company had completed the railway linking Sacramento with the Bay Area (Davis 1890). The Western Pacific Railroad Company had originally begun the venture but became one of many smaller companies absorbed by the Central Pacific Railroad in the late 1860s and early 1870s. Located about five miles east of the proposed pipeline route, this line is commonly known as the Southern Pacific. For the remainder of the century, the Central Pacific Railroad Company and Southern Pacific Railroad Company, which were owned by the same major shareholders and effectively operated as one interest, controlled and fixed the price of eastbound freight out of California. In 1903, a second Western Pacific Railroad Company was organized to compete against the Central-Southern Pacific monopoly (Brehm 1996). The Bay-to-Sacramento segment of the Western Pacific line, which runs along the proposed Project route, was part of a larger circuit connecting San Francisco with Salt Lake City. Franklin was a regular stop along this route, which began both freight and passenger service in 1910 (PG&E 2006). Glannvale, located near the proposed pipeline route, served as the stop between Franklin and Thornton.

The town, which is not plotted on current United States Geological Survey (USGS) quadrangle maps, apparently existed sometime during the middle part of the last century. Just north of Glannvale and east of the proposed pipeline route, Franklin Field was used as a training facility during World War II before the County of Sacramento acquired the property in 1947 and converted it into a public airport.

In addition, an historic suspension bridge is targeted for removal during the Project. The bridge, which spans the Cosumnes River, and is within the Project corridor, once carried the Line 108 gas pipeline across the river. The pipeline was removed from the

bridge at an unknown time, but the bridge remains relatively intact. Judging from the bridge's construction style and materials it was likely constructed in the 1930s or 1940s (PG&E 2006).

Existing Cultural Resource Landscape

Record Searches

Three record searches were conducted by staff of the North Central and Central California Information Centers of the California Historical Resources Information System, and staff of Applied Earthworks, Inc. over an approximate 14-month period between December 2004, and February 2006, in an effort to identify known cultural resources within the Project study area, which for the purposes of this cultural resources analysis, is a one-mile wide corridor, covering a half-mile radius from the centerline of the proposed pipeline route. Two were conducted at the North Central Information Center of the California Historical Resources Information System at California State University, Sacramento, on December 17, 2004, and February 8, 2006. Another was conducted on February 9, 2006, at the Central California Information Center at California State University, Stanislaus.

The record searches were conducted to identify locations of previous archaeological investigations and previously recorded prehistoric and historical sites and features within the Project study area. This was accomplished by a review of the information center's files and base maps as well as listings on the National Register of Historic Places, the Office of Historic Preservation Historic Property Directory, the California Historical Resources Inventory, Caltrans Bridge Inventory, California Historical Landmarks, California Points of Historical Interest, and historic maps.

Record Search Results

Nineteen archaeological resources and two State Historic Landmarks were previously recorded by various researchers within the one-mile wide Project study area (see Table 4.9-1 for specific researchers and dates, where available). Seven of these resources are located within the 200-foot wide pipeline corridor area of potential effect (APE). Twelve others are located outside the APE, but are within the one-mile wide Project study area. In total, twelve of the recorded sites are prehistoric. Most of these are burial/occupation sites recorded in the late 1920s. Notably, all of these sites are located at the southern end of the Project area, seven within the Cosumnes River Preserve and five south of the Mokelumne River. Their exact locations, however, are not defined, as

the records do not include precise locations, and subsequent surveys have produced possible alternate locations. The seven historic sites include the Western Pacific (currently Union Pacific) railroad grade, two steel bridges, and four residences. These are scattered throughout the Project area. The State Historic Landmarks, registered in San Joaquin County, include Benson's Ferry and Mokelumne City.

Four prehistoric sites are recorded within the APE. These include CA-Sac-15, 19, 49, and 190. No information exists for CA-Sac-15 with the exception of its location. It is assumed to be a burial/occupation site, as these were the types of sites that were paid attention to in the late 1920s. CA-Sac-19 is known to be a burial/occupation site with artifacts representative of the Middle and Late Horizon. CA-Sac-49 is known to be an occupation site dating to the Late Middle Horizon and possibly the Late Horizon. Lastly, CA-Sac-190 is noted as a midden site. The historic sites within the APE include CA-Sac-464H/CA-Sac-292H, CA-Sac-638H, and 1317-Site-1. These consist of the Western Pacific railroad grade, a 1924 residence, and a 1930s/1940s steel suspension bridge.

Pedestrian Survey

Intensive pedestrian surveys were conducted by Applied Earthworks, Inc. staff between November 21 and December 7, 2005, and on February 9, 2006, covering the Project APE (PG&E 2006). The majority of the surveys were accomplished by teams of archaeologists walking parallel transects spaced approximately 30 to 50 feet apart. Areas that exhibited visibility of less than 10 percent and are considered highly sensitive for cultural resources were examined by Surface Transect Units (STUs). This effort was to relocate prehistoric sites possibly obscured or altered due to the modern agricultural practice of laser leveling. Ninety-nine STUs were placed at intervals of approximately 165 feet along the northernmost 9,200 feet of the Project area within the Stone Lakes Wildlife Refuge, and along a 2,000-foot long section at the north end of the Cosumnes River Preserve. Each STU was approximately 11 square feet and excavated to a depth of approximately 4 inches. All excavated soil was screened through 1/4-inch mesh. In addition, two shovel test pits (STPs) were excavated in the HDD entry/exit area within the Cosumnes River Preserve in an effort to address the possibility of subsurface resources. STPs were approximately 20 inches by 8 inches, to depths of about 40 inches. As with the STUs, all STP sediments were passed through 1/4-inch mesh.

Validation Survey

In 2007, a validation survey was conducted by Tremaine and Associates staff to confirm previous findings. Seven prehistoric sites were targeted for relocation. GPS coordinates for each purported location calculated using GIS were used to guide the relocation effort since the original site indicators are no longer present. Regular transects approximately 20 to 35 feet wide were walked perpendicular to the Project corridor in these locations, periodically clearing vegetation to inspect the ground surface. Burrow holes and exposed patches of ground were also inspected. Surface soils were passed through 1/4-inch mesh. This method was repeated in possible alternate locations outside the APE, but within the Project study area.

Survey Results

None of the prehistoric sites within the Project APE (CA-Sac-15, -19, -49, and -190) were relocated (PG&E 2006). The locations of two previously recorded historic sites, the Western Pacific railroad grade and CA-Sac-638H (a 1924 residence), were revisited. The residence at 9853 Franklin Boulevard was found to be demolished to make way for a newly built subdivision. One previously unknown site, 1317-Site-1, was identified prior to fieldwork and subsequently recorded. It is a suspension bridge across the Cosumnes River that at one time supported the Line 108 gas pipeline. The results of the 2007 validation survey were similar to that of the 2005 and 2006 surveys. None of the prehistoric sites within the Project APE were relocated, confirming the initial survey results.

Table 4.9-1. Cultural Resources within the Pipeline Right-of-Way (ROW)

Trinomial	Resource Type	NRHP Eligibility	Condition	Comments/Record Source
CA-SAC-14	Unknown, but probably an occupation and/or burial site	UE	NR	No documentation available other than plot on NCIC base map.
CA-SAC-15	Unknown, but probably an occupation and/or burial site	UE in APE	NR	No documentation available other than plot on NCIC base map.
CA-SAC-19	Prehistoric Burial & Occupation Site	UE in APE	NR	1929 Schenck & Dawson noted as a Middle & Late Horizon Site; 1995 Jones & Stokes was unable to relocate; 2005 Applied Earthworks was unable to relocate; 2007 Tremaine & Associates was unable to relocate.

Trinomial	Resource Type	NRHP Eligibility	Condition	Comments/Record Source
CA-SAC-49	Prehistoric Occupation Site	UE in APE	NR	1929 Schenck & Dawson Late Middle Horizon & possibly Late Horizon Site; 1995 Jones & Stokes was unable to relocate; 2005 Applied Earthworks was unable to relocate; 2007 Tremaine & Associates were unable to relocate.
CA-SAC-153	Unknown but probably an occupation and/or burial site	UE	UN	Pilling 1959 located on Old Crump Ranch.
CA-SAC-154	Unknown, but probably an occupation and/or burial site	UE	NR	Pilling 1959 located on Old Crump Ranch.
CA-SAC-190	Prehistoric Midden	UE in APE	NR	1953 Dawson
CA-SAC-464H/CA-SJO-292H	Western Pacific (Union Pacific) Railroad grade	NE in APE	Existing, Integrity Compromised	1995 Jones & Stokes
CA-SAC-638H	1924 Residence	UE in APE	Recently Demolished	9853 Franklin Boulevard, Sacramento County
1317-Site-1	1930/40 Steel Girder Bridge	PE in APE	Good Condition	2005 Applied Earthworks
CA-SJO-58	Prehistoric Occupation Site	UE	NR, Reportedly destroyed prior to 1929	1929 Schenck & Dawson
CA-SJO-59	Burial & Occupation Site	UE	NR, Reportedly destroyed prior to 1929	1929 Schenck & Dawson
CA-SJO-60	Burial & Occupation Site	UE	NR, Reportedly destroyed prior to 1929, Reported still present in 1974	1929 Schenck & Dawson, 1974 Levulett, 2005 Applied Earthworks
CA-SJO-61	Burial & Occupation Site	UE	UN, Reportedly destroyed prior to 1929	1929 Schenck & Dawson/MM4a, 4b, 4c (5 and 6)
CA-SJO-62	Burial & Occupation Site	UE	UN Reportedly destroyed prior to 1929	1929 Schenck & Dawson

Trinomial	Resource Type	NRHP Eligibility	Condition	Comments/Record Source
P-39-560	Steel Truss Bridge 29C0392	NE	Good Condition	Age: 1937-1950
P-39-561	Residence	UE	UN	29251 North Thornton Road, San Joaquin County.
P-39-562	Residence	UE	UN	9945 Benson Ferry Road, San Joaquin Co.
P-39-563	Residence	UE	UN	29222 North Thorton Road, San Joaquin County.
SHL-149	Benson's Ferry	SHL	UN	Established in 1849- operated until at least 1859.
SHL-162	Mokelumne City	SHL	UN, Flooded in 1862	Established in 1850- relocated in 1874.

Notes: PE = Potentially Eligible; NE = Not Eligible; UE = Unevaluated; NR = Not Relocated; UN = Unknown; X = Sites with uncertain location; NCIC = North Central Information Center; SHL = State Historic Landmark; SJO = San Joaquin County; SAC = Sacramento County.

Native American Consultations

The Native American Heritage Commission (NAHC) was consulted by Applied Earthworks, Inc. in November 2005 to request a current list of local contacts and a review of its sacred lands file. Eight Native American groups/individuals either residing in or with cultural ties to the Project area were identified (see Table 4.9-2). These included representatives of both the Northern Valley Yokut and Miwok: Ms. Katherine Perez; Mr. Billie Elliston; Mr. Leland Daniels; Mr. Randy Yonemura; Ms. Silvia Burley, Chairperson of the California Valley Miwok Tribe; Mr. Glen Villa, Jr., Cultural Committee Chairperson of the Ione Band of Miwok Indians; Ms. Pamela Baumgartner, Tribal Administrator for the Ione Band of Miwok Indians; and Dwight Dutschke, Chairperson of the Sierra Native American Council. In November 2005, these individuals were notified by Applied Earthworks, Inc. to inform them of the proposed Project and to solicit their concerns and comments as well as any knowledge they might have regarding the presence of undocumented sites or traditional use areas.

Table 4.9-2. Native American Consultation List

Name	Group	City	State	Zip Code
Katherine Erolinda Perez	Northern Valley Yokut, Bay Miwok	Stockton	California	95206
Billie Blue Elliston	Miwok	Galt	California	95632
Leland Daniels	Miwok	Sacramento	California	95828
Randy Yonemura	Miwok	Sacramento	California	95824
Silvia Burley	California Valley Miwok Tribe	Stockton	California	95212
Glen Villa, Jr.	Ione Band of Miwok	Ione	California	95640

Name	Group	City	State	Zip Code
Pamela Baumgartner	Ione Band of Miwok	Ione	California	95640
Dwight Dutschke	Sierra Native American Council	Ione	California	95640

4.9.2 Regulatory Setting

There are several Federal and State laws and regulations applicable to historical and architecturally-significant resources, as well as archaeological and paleontological resources. The key regulations are discussed briefly below.

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) is the most influential Federal law dealing with historic preservation. In addition, Congress has enacted numerous other statutes that affect historic properties. One of the most important provisions of the NHPA is the establishment of the National Register of Historic Places (NRHP), the official designation of historical resources. Districts, sites, buildings, structures and objects are eligible for listing in the Register. Nominations are listed if they are significant in American history, architecture, archeology, engineering, and culture. The NRHP is administered by the National Park Service. To be eligible, a property must be significant under criterion A (history), B (persons), or C (design/construction); possess integrity; and ordinarily be 50 years of age or more.

Listing in the NRHP does not entail specific protection or assistance for a property, but it does guarantee recognition in the planning for Federal or federally-assisted projects (see Section 106), eligibility for Federal tax benefits, and qualification for Federal historic preservation assistance. The NRHP is influential beyond its statutory role because it achieves uniform standards of documentation and evaluation. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

State

California Register of Historical Resources

The California Register of Historical Resources establishes a list of those properties that are to be protected from substantial adverse change (Public Resources Code Section

5024.1). An historical resource may be listed in the California Register if it meets any of the following criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in California's past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- It has yielded or is likely to yield information important in prehistory or history.

The Register includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the Register. These may include resources contributing to the significance of a local historic district, individual historical resources, historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office (SHPO) procedures, historic resources or districts designated under a local ordinance consistent with California State Lands Commission procedures, and local landmarks or historic properties designated under local ordinance.

Health and Safety Code, Section 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC).

California Native American Historical, Cultural and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act applies to both State and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons mostly likely to be descended from the Native American remains. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resource Code, Section 5097

Public Resources Code, Section 5097, specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-Federal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

As used in this section, "public lands" means lands owned by, or under the jurisdiction of the State or any city, county, district, authority or public corporation, or any agency thereof. Consequently, PG&E's compliance with Public Resource Code Section 5097.5 for its activities on publicly owned land is required.

California State Senate Bill 18

California State Senate Bill 18 (SB18), signed into law in September 2004 and implemented March 1, 2005, requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places (also referred to as Traditional Cultural Properties). The Governor's Office of Planning and Research was mandated to amend its General Plan Guidelines to include the stipulations of SB 18 and to add advice for consulting with California Native American Tribes. According to the Tribal Consultation Guidelines, SB 18 "requires local governments to involve California Native Americans in early stages of land use planning, extends to both public and private lands, and includes both federally recognized and non-federally recognized tribes." (Governor's Office of Planning and Research 2005).

Local

Sacramento and San Joaquin Counties both maintain a general plan (GP) that reflects the State CEQA guidelines. The Sacramento County GP states that its goal is to "Promote the inventory, protection and interpretation of the cultural heritage of

Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts and/or areas of ethnic historical, religious or socio-economical importance." The San Joaquin GP's Heritage Resources section states its objective is "To protect San Joaquin County's valuable architectural, historical, archaeological and cultural resources."

4.9.3 Significance Criteria

An adverse impact on cultural resources is considered significant and would require mitigation if Project construction or operation would:

- Result in damage to, the disruption of, or otherwise adversely affect a property that is listed in the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), or a local register of historical resources as per section 5020.1 of the Public Resources Code;
- Result in damage to, the disruption of, or otherwise adversely affect an important archaeological resource (prehistoric or historic) such that its integrity could be compromised or its eligibility for future listing in the NRHP or CRHR could be diminished;
- Result in damage to, the disruption of, or otherwise adversely affect an important historical resource such that its integrity could be compromised or its eligibility for future listing in the NRHP or CRHR diminished; or
- Disturb any human remains.

4.9.4 Impact Analysis and Mitigation

Applicant Proposed Measures (APMs) have been identified by PG&E in its Environmental Analysis prepared for the CSLC. APMs that are relevant to this section are presented below. This impact analysis assumes that all APMs would be implemented as defined below. Additional mitigation measures are recommended in this section if it is determined that APMs do not fully mitigate the impacts for which they are presented.

APM CUL-2.[1] **Archaeological Monitoring and Data Recovery Plan.** Prior to the initiation of Project construction and any ground disturbance, PG&E shall hire a qualified archaeologist who meets the Secretary of the Interior's Standards for Archaeology and who is familiar with local conditions to prepare an Archaeological Monitoring and Data Recovery Plan (AMDRP).

[1] APM CUL-1 was completed by PG&E prior to preparation of this EIR, so it is not listed here.

The AMDRP shall require that a qualified archaeologist be present for all surface excavation Project activity that occurs south of Desmond Road. The AMDRP shall define how archaeological monitoring will be conducted, the protocol to be followed in the event that significant resources are discovered during monitoring, and where and how data recovery will be conducted for any important archaeological resources discovered.

The AMDRP shall specify that before initiating construction or ground-disturbing activities associated with the proposed Project, all construction personnel will be alerted to the possibility of buried cultural resources anywhere along the Project corridor. Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during Project construction activity, work shall be suspended, within 100 feet of the excavation, until the qualified archaeologist has inspected and evaluated the discovery. The CSLC shall be notified immediately of the discovery. Once approved by the CSLC, work may proceed on other portions of the Project while mitigation of impacts on archaeological resources is implemented.

A draft version of the AMDRP shall be submitted to the CSLC for review and comment. Once approved by the CSLC, a final version of the report shall be submitted to the CSLC. PG&E shall adhere to all recommendations included in the AMDRP.

APM CUL-4.[2] **Unanticipated Human Remains Discovery Procedures.** If human remains are discovered during any phase of construction, work within 100 feet of the remains shall be suspended immediately and the CSLC and the Coroner for the county in which the remains are discovered shall be immediately notified. If the remains are determined by the County Coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. PG&E shall also retain a professional archaeologist with Native American burial experience to conduct a field

[2] PG&E's APM CUL-3 was renamed and is included as APM PAL-1 in Section 4.3, Geology, Soils, Paleontology, and Mineral Resources.

investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The CSLC will be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of state law, as set forth in CEQA Guidelines Section 15064.5(e) and Public Resources Code Section 5097.98. PG&E shall implement approved mitigation, to be verified by the CSLC, before the resumption of activities at the site where the remains were discovered.

Known Cultural Resources

Three existing historic-period resources were identified during the latest archaeological survey for the Project area, including the Western Pacific Railroad Grade, pipeline Suspension Bridge, and Benson's Ferry. Potential impacts to these known cultural resources are described below.

Western Pacific Railroad Grade

The Western Pacific Railroad Grade (CA-SAC-464H/CA-SJO-292H) is a cultural resource that dates to the 1870s. Although it has not been formally evaluated, the integrity of this resource has been compromised due to multiple episodes of track replacement, system repairs, and upgrades. There would be a very low probability that the proposed Project would have an impact on portions of the extant Western Pacific Railroad Grade. Thus, it does not hold the status of an historical resource (a resource with importance and integrity, thus eligible and/or listed on the National or State registers) and requires no further cultural resources management consideration. Impacts to the Western Pacific Railroad Grade would be less than significant (Class III).

Benson's Ferry

The Benson's Ferry (SHL-149) resource is a landmark that represents the location of a ferry operation established in 1849, purchased and run by John Benson from 1850 until his murder in 1859, when his son-in-law took over the operation. No physical manifestation of the historic operation is known. However, it is possible that during this period, obscured evidence of temporary encampments on either side of the river may be present, reflecting a significant period in California's history. The proposed Project may cause ground disturbance in the vicinity of this landmark. Therefore, a possibility

exists of encountering unanticipated discoveries (see following subsection). Because a HDD is proposed to cross at least 60 feet below the river, the ferry site would be avoided. Impacts would be less than significant (Class III).

Impact CUL-1: Demolition of an Historic Resource

The proposed Project would result in the demolition of the Line 108 Suspension Bridge (1371-Site-1), which has been found to be an eligible historic resource (Significant and Unavoidable, Class I).

The Suspension Bridge (1317-Site-1) is a steel girder suspension bridge dating to the 1930s/1940s. The proposed Project would include the demolition and removal of the extant steel suspension bridge. This bridge has been assessed by Applied Earthworks, Inc. for eligibility to the NRHP according to the criteria provided in 36 CFR 60.4 and guidance provided by the National Park Service in the National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (see Appendix E). The assessment has been peer reviewed by Tremaine and Associates, Inc. and was found to be complete and adequate.

The assessment concluded that the bridge is eligible as an historic resource under Criterion C (embodies the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components may lack individual distinction) and D (has yielded, or may be likely to yield, information important in prehistory or history) and that the bridge retains integrity for all seven factors considered for such an evaluation (i.e., location, design, setting, materials, workmanship, feeling, and association). Because the proposed Project would include the removal of an eligible historic resource, prior to the demolition of the suspension bridge, it would need to be documented to Historic American Engineering Record (HAER) standards (see Mitigation Measure CUL-1).

Mitigation for Impact CUL-1:

MM CUL-1. Document the Pipeline Suspension Bridge to Historic American Engineering Record (HAER) standards. PG&E shall submit a final version of the bridge evaluation report to the Northwest Information Center (NCIC) of the California Historic Resources Information System (CHRIS). As recommended in that report, the pipeline suspension bridge

shall be documented to HAER standards. Such recordation shall include, but need not be limited to:

- Additional research in PG&E archives to establish if this bridge was locally or regionally unique to the natural gas pipeline system, or if suspension bridges were standard features of the lines. The existence of other such bridges in the system, their location, and status of use should be documented through a comparison of historical documents and as-built drawings to the inventory of the subject suspension bridge.

- Further documentation on the pipeline and bridge design, construction, and maintenance.

- Large format photography of the bridge and its setting. This could entail the use of a boat to reach both sides of the bridge.

- Measured drawings of the bridge, if as-built drawings cannot be found.

Rationale for Mitigation

Documentation of the pipeline suspension bridge to HAER standards would reduce impacts to the historic resource under Criterion C. However, with respect to Criterion D, compilation of HAER-level documentation of the bridge would not reduce the impact to a less than significant level. Therefore, the impact would be significant, and unavoidable (Class I).

Residual Impacts

Although implementation of Mitigation Measure CUL-1 would reduce impacts associated with the proposed demolition of the pipeline suspension bridge to the greatest extent feasible, impacts would continue to be significant. Impacts to the historic pipeline suspension bridge would be significant and unavoidable (Class I).

Unanticipated Discovery of Cultural Resources

An unanticipated discovery implies the discovery of a resource that has not yet been evaluated to determine if it meets the criteria for eligibility for inclusion to either the State or National registers. Once an unanticipated discovery has been evaluated, it may receive the designation Historical Resource, a term with legal implications under CEQA

that refers to a resource that has been formally evaluated and found eligible. The distinction between the two classifications is made to indicate the legal standing of the resources as well as the obligations for protection required.

Impact CUL-2: Unanticipated Discovery of Cultural Resources

If Project construction encounters currently unknown cultural resources, either prehistoric or historic, pursuant to CEQA Guidelines Section 15064.5 or CEQA Section 21083.2(g), this could cause substantial adverse changes to the significance of the resource. (Potentially Significant, Class II).

The known cultural resources discussed above do not appear to qualify as unique archaeological sites, per Public Resources Code Section 21083.2, or are not within the immediate vicinity of the proposed construction sites. No other potentially unique archaeological resources have been identified along the proposed Project route. However, this does not preclude the existence of unidentified, buried archaeological remains. Buried archaeological remains such as prehistoric midden deposits, flaked and ground stone artifacts, bone, shell, historic artifacts and features, or other cultural resources could be damaged during trenching, excavation, drilling, and other construction related activities.

PG&E has committed to implementing Applicant Proposed Measure APM CUL-2, which requires a qualified archeologist to be present at all surface excavation activities in the most sensitive portion of the route, south of Desmond Road, and preparation of an Archeological Monitoring and Data Recovery Plan. In addition to the archeological monitoring south of Desmond Road, construction activities along the route would also be observed by other qualified professional environmental monitors, including a qualified paleontologist (see APM PAL-1 in Section 4.3, Geology, Soils, Paleontology, and Mineral Resources). To provide more detail for procedures to be followed in the event that an unanticipated cultural resource discovery, Mitigation Measure CUL-2 shall also be implemented.

Mitigation for Impact CUL-2:

MM CUL-2. Unanticipated Cultural Resource Discovery Procedures. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 100 feet of the resources shall be halted and PG&E shall notify the California State Lands Commission (CSLC) and shall consult with a qualified

archaeologist to assess the significance of the find. If any find is determined to be significant, representatives of PG&E, the CSLC, and the archaeologist shall meet to determine the appropriate avoidance measures or other appropriate mitigation, with the ultimate determination to be made by the CSLC. All significant cultural materials recovered shall be, as necessary, subject to scientific analysis, professional museum curation, and a report prepared by an archaeologist according to current professional standards.

In considering any suggested mitigation proposed by the archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the CSLC shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project site while mitigation for historical resources or unique archaeological resources is carried out.

If the CSLC, in consultation with the archaeologist, determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed Project, the CSLC shall require PG&E to:

- Re-design the Project to avoid any adverse effect on the significant archeological resource, if feasible; or

- Implement an archeological data recovery program (ADRP) (unless the archaeologist determines that the archeological resource is of greater interpretive use than research significance and that interpretive use of the resource is feasible). If the circumstances warrant an ADRP, such a program shall be conducted. The archaeologist and the CSLC shall meet and consult to determine the scope of the ADRP. The archaeologist shall prepare a draft ADRP that shall be submitted to the CSLC for review and approval. The ADRP shall identify how it would preserve the significant information the archeological resource is expected to contain. That is, the ADRP shall identify the scientific/historical research questions that are applicable to the expected resource, the data classes the resource is

expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed Project.

Rationale for Mitigation

Implementation of Mitigation Measure CUL-2 would ensure that proper procedures are followed should an unanticipated cultural resource discovery occur. Impacts would be reduced to less than significant levels (Class II).

Unanticipated Discovery of Human Remains

There is no indication that any area along the proposed pipeline route or in the vicinity of any proposed temporary use area locations has been used for burial purposes in the recent or distant past. Thus, it is unlikely that human remains would be encountered during Project construction. However, damage could occur to previously unknown locations of human remains, including those interred outside of formal cemeteries, during excavation and other construction related activities. With implementation of APM CUL-4 as proposed by PG&E, impacts would be less than significant (Class III).

Table 4.9-3 presents a summary of impacts on cultural resources and the recommended mitigation measures.

Table 4.9-3. Summary of Cultural Resources Impacts and Mitigation Measures

Impact	Mitigation Measure
CUL-1. Demolition of an Historic Resource	**MM CUL-1.** Document the Pipeline Suspension Bridge to Historic American Engineering Record (HAER) standards.
CUL-2: Unanticipated Discovery of Cultural Resources	**MM CUL-2.** Unanticipated Cultural Resource Discovery Procedures

4.9.5 Impacts of Alternatives

No Project Alternative

The No Project Alternative would not result in the construction and operation of a new natural gas pipeline between the Elk Grove and Thornton Stations. The active segment of the existing Line 108 pipeline would continue to provide distribution services to local

landowners. No impacts to cultural resources would occur under the No Project Alternative.

Franklin 1 Alternative

The Franklin 1 Alternative would run on the east side of the Union Pacific Railroad (UPRR), following PG&E's existing easement and would continue north veering east around a UPRR property and trenching through Bilby Road. North of Bilby Road, this alternative would veer west to just east of the UPRR tracks, to a location south of an unnamed slough. This slough, the UPRR, and Franklin Boulevard would be crossed by an HDD, to the west side of Franklin Boulevard. No known additional cultural resources have been recorded within the APE of the Franklin 1 Alternative that is not part of the proposed Project route. However, as with the proposed Project, this alternative would result in a significant and unavoidable impact associated with the removal of the potentially historic pipeline suspension bridge (Class I). In addition, the possibility of encountering unanticipated cultural resource discoveries exists. Impacts would be less than significant with implementation of Mitigation Measure CUL-2 (Class II).

Franklin 2 Alternative

The Franklin 2 Alternative would run north on the west side of the UPRR, trenching across Bilby Road and would continue north to a point south of the unnamed slough and then be installed via HDD technique west under the slough and Franklin Boulevard. No known additional cultural resources have been recorded within the APE of the Franklin 2 Alternative that is not part of the proposed Project route. However, as with the proposed Project, this alternative would result in a significant and unavoidable impact associated with the removal of the potentially historic pipeline suspension bridge (Class I). In addition, the possibility of encountering unanticipated cultural resource discoveries exists. Impacts would be less than significant with implementation of Mitigation Measure CUL-2 (Class II).

Project without Bridge Replacement Alternative

The Project without Bridge Replacement Alternative would leave the potentially historic suspension bridge in place, which would eliminate the significant and unavoidable (Class I) impact associated with the bridge removal under the proposed Project. However, the possibility of encountering unanticipated cultural resource discoveries would continue to exist under this alternative. These impacts would be less than significant with implementation of Mitigation Measure CUL-2 (Class II).

4.9.6 Cumulative Projects Impact Analysis

In addition to the proposed Project, the only potential sources of disturbance to cultural resources along the Project corridor include accidental disturbance by recreational users; vandalism; and maintenance of existing roads and other pipelines in the vicinity of the Project. No new projects are proposed in the construction ROW of the proposed Project.

The proposed Project would result in a significant and unavoidable impact associated with the demolition of the potentially historic pipeline suspension bridge. Therefore, with respect to historical resources, the Project would be cumulatively considerable and significant cumulative impacts would result (Class I). The proposed Project is not expected to significantly affect other cultural resources if the Applicant Proposed Measures and Mitigation Measure CUL-2 described above are implemented. Any projects proposed near the construction ROW of this portion of Line 108 would be required to implement mitigation measures similar to those outlined above. Therefore, cumulative impacts on non-historic cultural resources would be less than significant (Class II).